New England Deaconess Hospital **1975 Annual Report**

Cancer Research Institute

Shields Warren Radiation Laboratory

R.D. Lowry Medical Office Building

Joslin Clinic/Lahey Clinic

Overholt Thoracic Clinic

William A. Meissner Laboratory

"A Personal Touch"

The New England Deaconess Hospital is dedicated to providing quality health care not only with superior skills and modern technology but with particular concern for our patients as distinct human beings with individual anxieties and needs . . . the New England Deaconess Hospital tries always to offer a personal touch.

Patient Statistics

Number of beds	471
Patients admitted	13,713
Patient days	160,111
Average stay	11.7
Surgical procedures	6,515
X-rays taken	47,302
Radiation Therapy Treatments	8,243
Laboratory tests	700,735

Personnel Facts

Medical Staff	362
Basic research scientists	14
Residents	68
School of nursing enrollment	186
Total employees	2,090
Membership of Friends of the Deaconess (including 75 Life Members)	400

C. Vincent Vappi, Chairman of the Board
Laurens MacLure, President

Report of the Administration

Several years ago, Peter Drucker, the well known author and professor of business administration, was quoted as having said that hospitals represent one of the most complex management organizations ever to be conceived. This was true then and is even more so in today's rapidly changing and increasingly regulated environment.

Recognizing that these trends were placing more and more responsibility on hospital Trustees, the Executive Committee appointed an ad hoc committee on Trustees to review the governance of our hospital in the spring of 1974. After a year of study this Committee recommended: that the full Board meet monthly in order that all of our Trustees might be fully informed and participate in policy deliberations; that the Executive Committee assume a secondary role, acting only in emergencies; that the size of the Board be reduced to a more workable number over a five year period from 51 to 21; and that the Medical Staff have representation on the Board. These recommendations were accepted and new Bylaws were approved by the Corporation at a special meeting in the early fall. The full board has met twice since, and despite the currently large size of the Board, the monthly meetings have been well received. Concurrently, the Search Committee appointed to find a replacement for Mr. Lowry who is retiring, recommended the Trustees recognize the need for a full time President and Chief Executive. Mr. Laurens MacLure who has been associated with our hospital for almost twenty years in various voluntary capacities was asked to take this position. He accepted our offer and took up his new duties in June.

Construction has continued uninterrupted by strikes or other delays on both the Clinical Laboratory/Radiation Therapy facility and the new School of Nursing. As a result of the unusually good weather last summer both projects are ahead of schedule. We expect that the laboratory floors will be occupied in December and, following the delivery of a new 12MeV linear accelerator, the radiation therapy department will become operational in their new quarters sometime in early spring. The Nursing School is expected to be completed

ahead of schedule in June. This will enable the faculty to move in during the summer and the student nurses to take up residence on their return from vacation in September.

The cost of the new School is being met by a $2,500,000 grant from the Frederick J. Kennedy Foundation, available unrestricted funds and a capital fund drive. To date the Development Council under the Chairmanship of Colby Hewitt, Jr. has raised over $800,000 and we are hopeful its $1,050,000 goal will be reached before construction is completed next summer.

With the start of the nearby Convent Housing Project in September, the employees in the Longwood Area Medical complex lost approximately 1,700 parking spaces. This has placed even more pressure on our limited facilities. Our Pilgrim Road garage was designed for a 350 car lateral extension. We are actively working on plans to demolish the Autumn Street apartment house to make way for expansion of this garage.

Elsewhere in the hospital, space is also very scarce. Many departments are cramped and over crowded with no room for expansion as volume increases. Every year we find that we must add new services. While we can look forward to some relief when the space in Palmer and Harris Hall now occupied by the

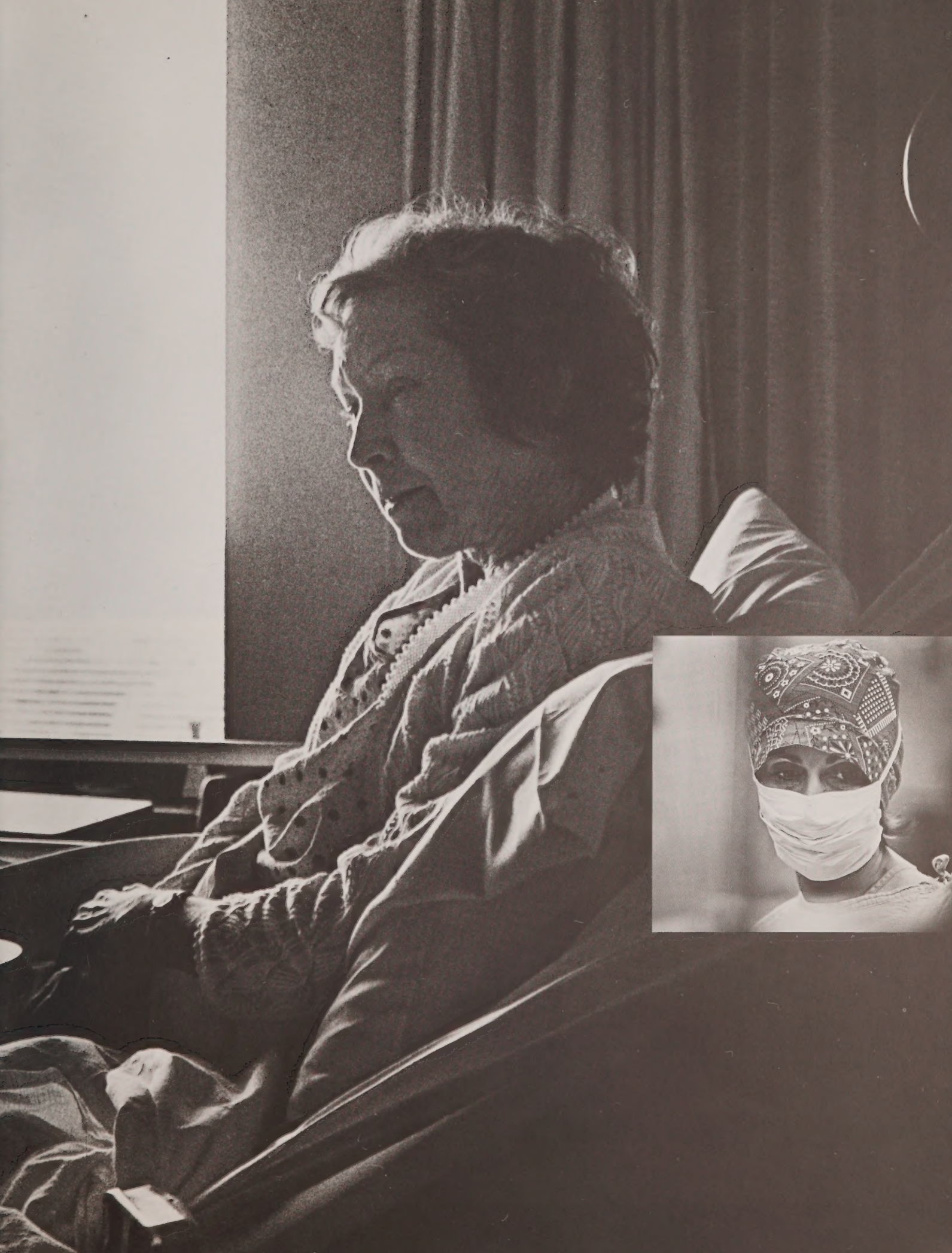
laboratories and Nursing School becomes available; we must be careful not to utilize these areas in such a way as to block future expansion. With this in mind we will be undertaking the development of a long range space and facilities study starting in early 1976.

Last year we reported the Long Range Planning Committee's "Proposal for Meeting Long Range Objectives of the New England Deaconess Hospital" had been approved by the Executive Committee, and that the details for implementation had been worked out. The proposal which contemplated making the Chairman of the Department of Medicine together with a limited number of supporting physicians full time hospital based was inaugurated last January under the name "Deaconess Medicine". We are happy to report that the organization of this new specialist group has gotten off to a good start and should enable the Hospital to better meet future demands.

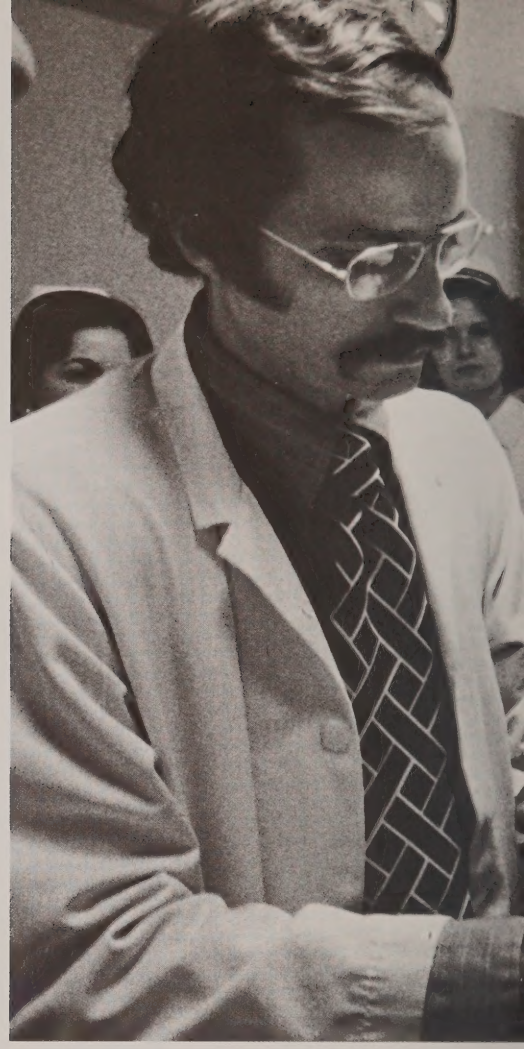
Financially, we had a good year ending up with a modest surplus from operations and a comfortable operating cash balance. But this does not begin to tell the real story. The Governor's bill to freeze hospital charges which was filed in early spring, if passed, could have crippled every hospital in the state. Fortunately, it was substantially amended and was finally enacted as a law to regulate hospital charges. In addition, the State's precarious financial condition led to long delays in Medicaid reimbursements to hospitals. At the same time, because insurance companies were refusing to renew malpractice insurance for both doctors and hospitals, a crisis arose in this area which led to the passage of legislation creating a state sponsored Joint Underwriting Association for those who could not obtain insurance through conventional channels. We have only recently been informed that our malpractice insurance will not be renewed, and it appears we will be forced to join the JUA. Meanwhile we are pursuing several alternatives which we hope will provide the necessary coverage for the Hospital, its employees, nurses, physicians and house staff at a lower premium cost than the JUA.

This report would not be complete without formal recognition of Mr. Lowry's impending retirement after thirty years of service to our Hospital. Don came East to the Deaconess in 1946, planning to stay for only "a couple of years". While we can take justifiable pride in having been able to persuade him to remain, we can never adequately thank him for his inspired leadership over the past three decades. To a very large degree he has been responsible for growth and development of our hospital during this period.

We also wish to extend our appreciation to our Trustees, members of our Medical Staff, Administration and employees who have worked so hard this past year to maintain the excellence in patient care for which the Deaconess is known.



James L. Tullis, M.D.
Chairman



Report of the Department of Medicine

The forces which are impinging on medicine both within and without hospitals have reached a proportion in 1975 that makes their consideration more poignant than the customary annual statistics of the Department's activities. What are these factors and what do they portend?

Influences Within Hospitals:
At least three separate forces are tending to impact on the quality of training and practice in all departments of medicine. First, there is a steady increase in the number of students. Schools have responded to governmental and community pressures to increase the output of physicians. Simultaneously there is an unanticipated increase in the number of graduates who wish to enter primary medical practice, thus increasing the pressure for positions in training programs in general Internal Medicine. These trends have not been balanced by a proportionate increase in the number of physicians who are either able or willing to teach. Second, the shortage of beds in high quality institutions such as this has largely eliminated admissions for diagnostic work-up or simple uncomplicated illness. Nearly all of the patients at the Deaconess are so sick that the amount of time and involvement which must be expended by house staff bears no relationship to previous standards. Third, the paperwork continues to rise logarithmically in response to the many quasi-legal boards, bureaus, audit committee site-review committees and allied bodies which constantly monitor the performance and diverse functions of a department like this. For example, during 1975 the department had to prepare lengthy reports, statements and documentation for no less that 14 different committees within and without the hospital in connection with the performance, knowledge, state of health or state of the mind of 156 members of the senior staff, 56 members of the house staff and 128 of the same individuals for whom separate documents had to be formalized for faculty appointments at Harvard. This was exclusive of research grant evaluations.

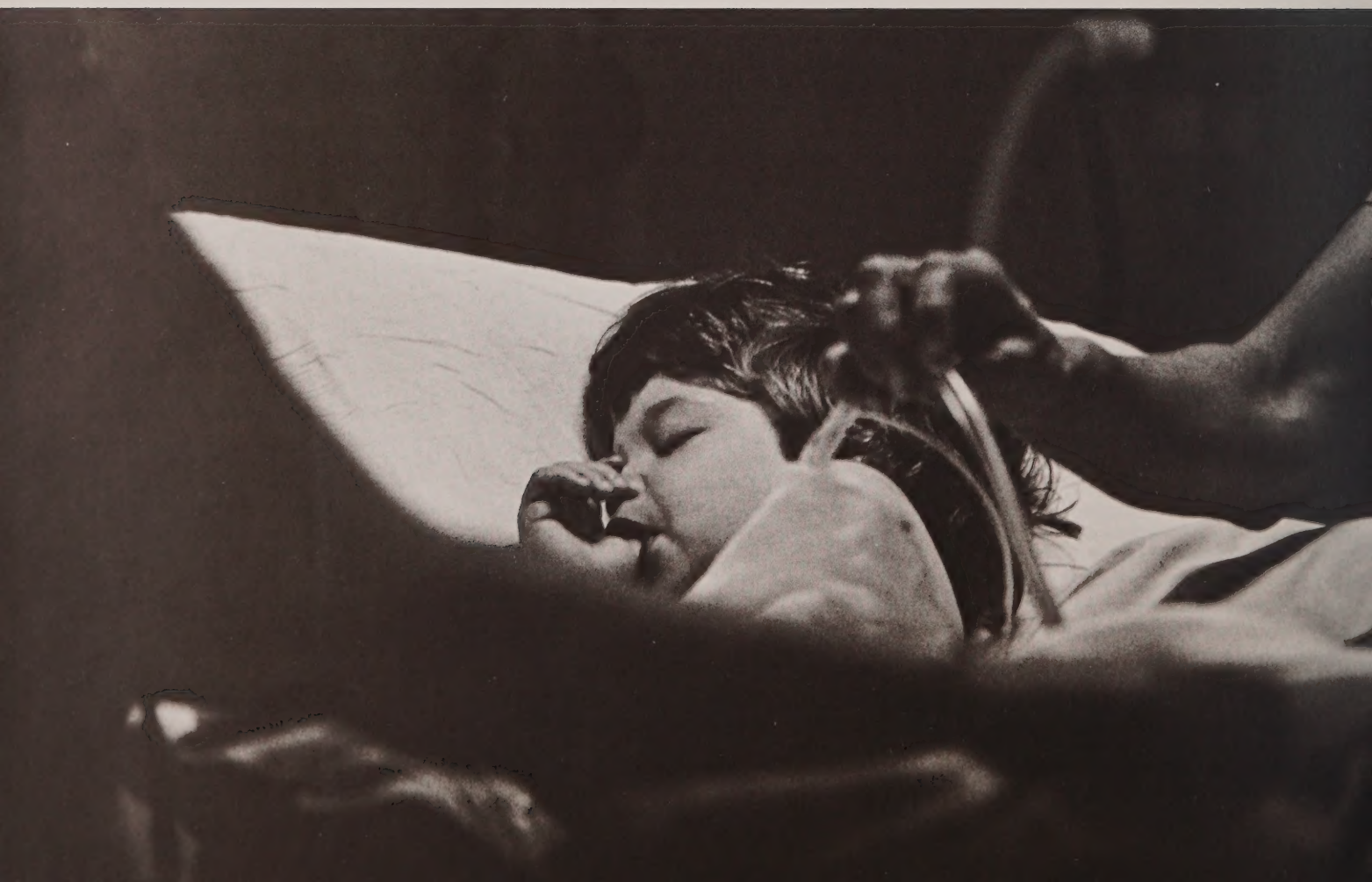
A review of the influences within the hospital should also touch on another aspect. It was with distinct pride and pleasure that the physicians in Medicine watched Don Lowry reach retirement age while still in good health. They hope that he may enjoy the many years of rest and relaxation which he so richly deserves. The fundamental role which his foresight played in the formation of this department should be spread upon the records. Without his guidance and counsel none of the progress of the past decade could have been possible in Medicine.

Influences from Without the Hospital: Among the forces attempting to influence medical practice from outside, none is so dire as the determination of federal and state health planners to get control of the fiscal management of hospitals. At a time when the Commonwealth is in worse financial disarray than since its days as a Crown colony, and with the federal government only slightly behind in inefficiency, the bureaucrats have augustly announced their intent to take over hospital finances in order "to keep costs under control". With a track record such as theirs one wonders what may be ahead for sick patients. It is clear, however, that the principal game plan is that of programmed mediocrity. Total costs will remain fixed. New growth will be stopped. Marginal and mediocre hospitals will be supported by penalizing good ones like this. This is the same irretracible road down which the British health care system tottered to its present state of outworn equipment, loose plaster and spiritless doctors. It is also a road which has been chosen without a scintilla of support from the public. Indeed, the public is as yet totally unaware it is in the wind. The poor of America aspire to something better than a larger quantity of poorer quality. Politicians feel important when they talk of large numbers, "$100 billion dollars of annual health care costs", or "lets hold medicine to 8% of the GNP". Accuracy gets overlooked in such polemics. Is toothpaste considered health care? That's part of the $100 billion. Is a good mouthwash considered health care? That's part of the $100 billion. If one strips away such frivolities and the even greater costs of purely *social* concerns such as custodial care of a grandma for whom children have abrogated their traditional support, the actual expenditure for acute medical care is in close harmony with the inflationary costs of coffee and subway rides.

Can a nation truly be so incongruous that it will set cost limitations on large numbers of lives by turning off a continuing search for medical excellence, yet at the same time legally require maintenance of life in a decerebrate accident victim who has no more responsiveness than a pithed frog? Ready answers to such paradoxes do not exist. However, it behooves us to face up to our responsibility with candor and integrity. If we fail to fight for the freedom of expression and freedom of achievement which were won at such cost by our forebears, we will only sink into a mathematical mean.

Report of the Department of Surgery

Cornelius E. Sedgwick, M.D., Chairman



The report from the Surgical Department over the past few years has been devoted to progress made in patient care, medical education, new procedures, and new sophisticated equipment which aid in diagnosis and treatment. This year I wish to present a statistical study of the past decade. We are all interested in the future and long-range planning. A study of changing trends during the past ten years may help us to plan for the next decade.

Graph I shows the number of operations performed a year since 1966. Starting at 5,500 there was a slight decline to 1969. Those were the "construction" years with limited space. From 1970 to 1973 we had a rise to about 7,000 cases. The decline in 1974 is a reflection of the opening of the Ambulatory Unit. Much of the minor surgery is now performed in that unit, thus making more time available in the operating rooms.

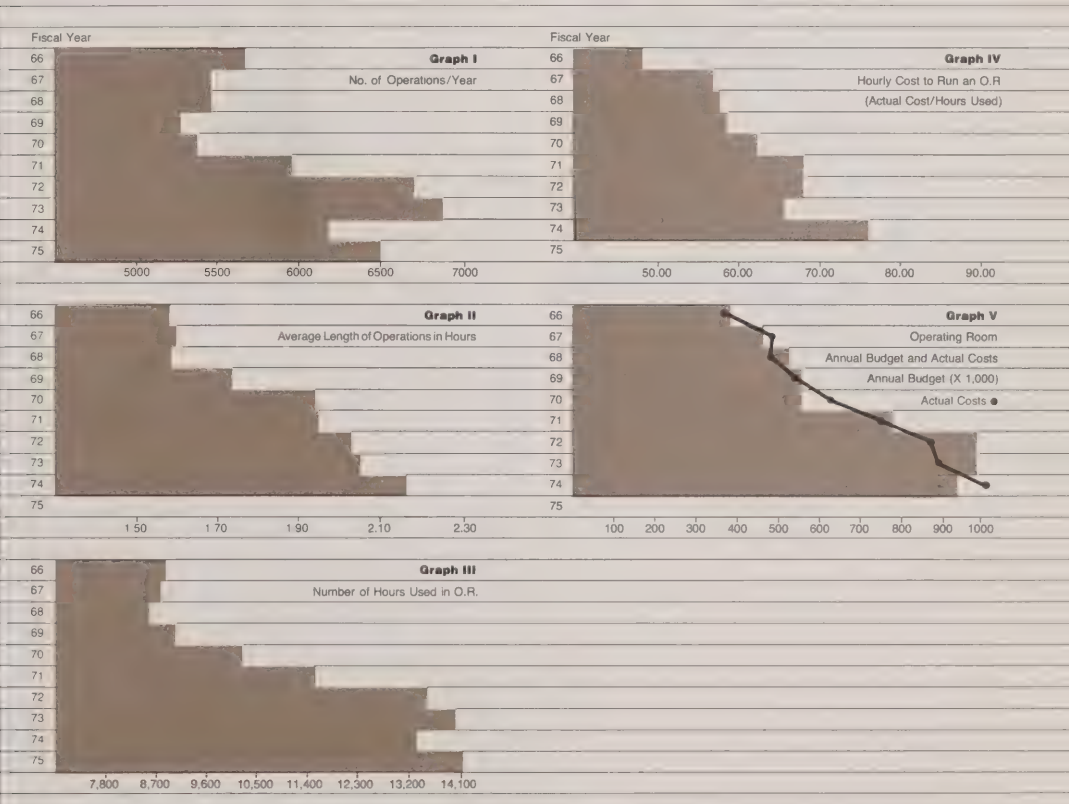
Graph II depicts the increase in length of time operations took from a mean of 1.55 hours in 1966 to 2.21 hours in 1974. I think this is because we are performing more complicated and more time consuming operations than in the past, that is, cardio-vascular surgery, total hip replacements, and renal transplants. This also indicates that we are remaining a multispecialized hospital.

Graph III shows the increased number of hours actually used in the operating room and reflects an increasingly better utilization of the operating rooms.

More operations, more hours of operating room time, and more complicated surgical procedures require more sophisticated equipment and more surgeons, anesthesiologists, nurses and operating room technicians. This plus inflation has increased the cost of running the operating room. This is seen in Graph IV. The actual cost of running an operating room for one day was about $35 in 1966; today, it is about $75. All of this is seen in Graph V, which shows our annual budget and actual costs: $400,000 in 1966 to $1,000,000 in 1975.

It is unlikely that these trends will change. Although admissions are made to the medical service more often than to the surgical service, many of these patients require an operation and are transferred to surgery after admission. At the moment it is almost impossible to meet our daily operating demand. We must think in terms of more space, more equipment, more personnel, and, perhaps, even better utilization of operating rooms and equipment, that is, longer days, weekends, and the like.

Despite our pressures, the New England Deaconess Hospital can be proud of the quality and performance of our operating room staff. This is, in great measure, due to the skill, devotion, and motivation of Miss Margaret Burns, RN, Director of Surgical Services, and Mrs. Madeline Celander, RN, Assistant Director of Surgical Services, and their staffs.



Report of the Department of Pathology

Merle A. Legg, M.D., Chairman

The popular concept of a laboratory often seems to include a rumpled-haired, absent-minded individual dedicated to the pursuit of truth, working odd hours and isolated in his or her laboratory. The only resemblance that picture bears to the reality of the pathology laboratories is that the laboratories are dedicated to the pursuit of truth and there are technologists working around the clock seven days a week. The department regards as its first concern the care of the patient. What that means is that the patient should receive as a matter of course rapid, precise laboratory diagnostic aid and therapeutic support and control at whatever level is indicated. To the patient it is just as important that the technologist who draws his or her blood does so with precision, empathy and cheerfulness as it is that during his or her open heart operation a technologist, using sophisticated equipment, throughout the operation carefully monitors the blood gases, the levels of which are vital to the patient's survival. The patient who needs an operation with the support of blood transfusions should expect to be cared for at the Deaconess whether the person has the type of blood which can be supplied by one of ten prospective donors or so rare a type of blood that only one in 10,000 prospective donors has the right type. For the most extreme blood matching problems, it is now possible to draw blood from the patient one or more times well ahead of the operation, freeze and store the blood for use to transfuse the patient with his or her own blood at the time of the operation. The patient needs to know that the laboratory is as concerned with the simple procedure that requires ten minutes as it is with the ultimate quality control of medicine, the autopsy, which requires many hours of work by a whole team over two or three weeks, but which benefits every living patient in the hospital.

In the constant struggle to sort out the significant useful advances from prospective modifications of tests, introductions of new tests and new or modified apparatus, the laboratories every year must make many changes. One recognition of the effectiveness of this effort and adaptability is that the laboratory is serving as one of twenty laboratories assisting the National Bureau of Standards in the development of new reference methods.

Some of the innovations in the past year include atomic absorption measurements in the chemistry laboratory of several important blood components, the augmentation of the radioimmunoassay section by new counting equipment, and the use of a test using new apparatus for the detection of clots in leg blood vessels. In hematology our early trial of a machine called LARC which can identify the different types of white blood cells not only helped in assessing the development of the machine for hospital use but also led to our acquisition of one for routine use, accelerating the differential counting of the white blood cells with the careful control that does not sacrifice accuracy, but with conservation of technologist time.

Microbiology has developed the potential for isolating medically significant anaerobic bacteria and their identification, using gas chromatography. Other techniques are being used which allow identification of several species of bacteria at least a day earlier than before.

The exciting new machinery and technology which the clinical pathologist is developing and using tend to outsparkle the anatomic pathologic techniques which allow little automation, but demand much personal handling by technologist and pathologist. However, skillful hands and eyes assure every day practices such as the specific evaluation of the tumor biopsy by the pathologist, the vital fact on which treatment depends. The department received more surgical specimens for diagnosis last year than had ever been received in a previous year. The effectiveness of another tool can be illustrated by the fact that discovery of cervical cancer in its earliest stage before invasion occurs, that is, carcinoma in situ, is really made possible by Papanicolaou smears. In that stage, the tumor is nearly 100% curable. In our laboratory, the use of such cytology in discovering tumors of the urinary tract has increased exponentially in recent years. Fine needle aspiration biopsies of tumors are being used more extensively, too.

The nearness to completion of the new laboratory building and the tremendous satisfaction in the Trustees action in naming the building The William A. Meissner Laboratory have been the highlights of the year. Such graceful recognition of the unique contributions to the hospital by Dr. Meissner reflects the warm gratitude of the department.

Among significant administrative changes, the department has a new and effective Laboratory Administrator, Mr. William D. Tobin. Mr. Donald A. Saabye, his predecessor, leaving a difficult job well done, has also left many friends. Dr. Micheline Federman has transferred from the Cancer Research Institute to be in charge of electron microscopy in the department. The return of Dr. Randi V. Rosvoll to full time status is another real benefit for the department. The experimental rotation of the department chairman has taken another turn, allowing Dr. Bradley E. Copeland to shuck the heavy cloak and to return more of his attention to his love, clinical pathology.

Finally and clearly, to be able to function best for the patient's welfare, the department must also be involved in teaching and research. The serious commitment of the department to a great range of diverse teaching programs from undergraduate to post-specialty continuing education would require a report by itself and the same is true for the research efforts of the department.

Report of the Department of Diagnostic Radiology

Melvin E. Clouse, M.D.
Chairman

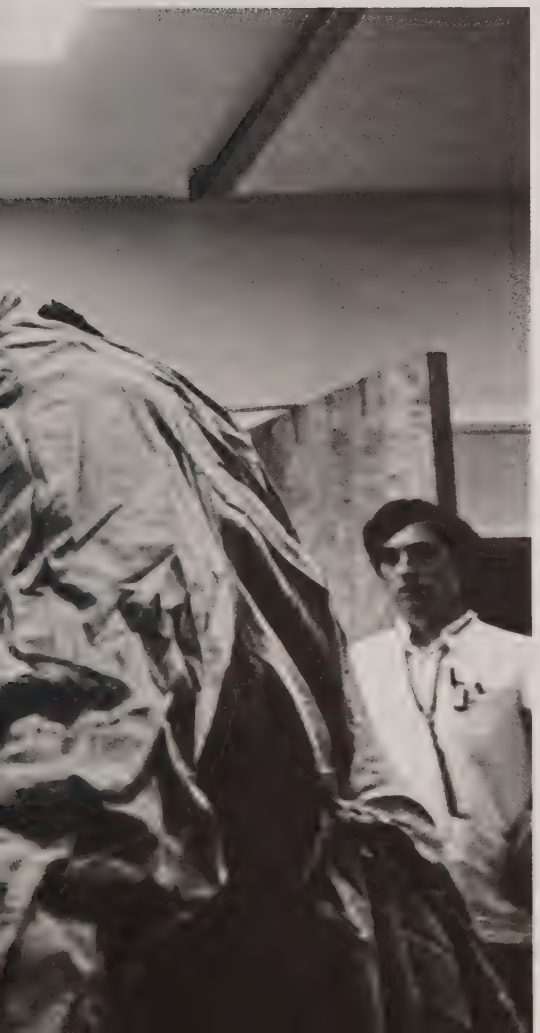
The Diagnostic Radiology Department was expanded in 1972. At that time there was space for a Radiology Conference Room and Radiology Staff Offices. Since 1972 the departmental work load has increased by 51% to 50,000 examinations. In addition, we have added Ultrasound and Mammography. In order to accomplish this and maintain our high level of service we have had to take over the Conference Room and Radiology Staff Offices for work areas. Currently, therefore, we are looking forward eagerly to the new space that will become available with the opening of the William A. Meissner Laboratory Building. In this new space we will add two uroradiology rooms that can also be used for general radiographic procedures to accommodate the increased load from Podiatry and the Joslin Clinic Expansion, as well as space for neuroradiology and computerized axial tomography. In addition, we are replacing an older diagnostic unit with an automated chest room to increase the efficiency of service and speed up the work flow through the department.

Subspecialties within the department now include Mammography, Nuclear Medicine, Angiography, and Ultrasound. Dr. Harry Bailey and Dr. Herbert Gramm supervise and interpret the mammographic examinations in the department. Mammography is now performed using the xeroradiographic process. Xeroradiography involves the production of an image utilizing a photoconductor (selenium) which is electrostatically charged and then exposed like X-ray film. The radiographic exposure selectively discharges the plate. The plate is then developed by means of a charged powder producing a visible image that is transferred to paper by electrostatic means. Xeroradiography of the breast is more readily interpreted, because the image is more consistently good and radiation to the patient less than conventional film mammography.

Dr. Edward Sun supervises the Nuclear Medicine section. Nuclear Medicine is an exciting subspeciality of radiology that is growing rapidly in number and types of examinations per year. The number of examinations increased from 1,700 in 1972 to 2,700 in 1975. The addition of a third staff technologist in September allows for more effective utilization of machine time and increased productivity from our present two units.

In addition to the routine scanning of bone, lung, chest, and brain lesions we will be adding a wide area rapid gamma camera for performing complex pulmonary and cardiac studies. We will routinely do pulmonary ventilation and perfusion scans in addition to measuring cardiac output, left ventricular ejection fractions and measure cardiac contractility accurately in addition to myocardial imaging for infarction.

Dr. Daniel G. McDonald supervises the Ultrasound section. Ultrasound is a relatively new specialty that has developed from sonar used in World War II to detect underwater objects such as submarines and measure underwater distances. It is now used to evaluate masses in abdominal organs and determine whether they are cystic and benign or solid and malignant. If a tumor of the kidney is considered cystic and benign it can be punctured using an ultrasonic probe with aspiration of the fluid for chemical analysis. If it appears solid then an arteriogram is performed to better define the stage of the disease. Ultrasound is also useful in evaluating the jaundiced patient for obstruction of the bile ducts and evaluating masses of



the pancreas It is extremely useful in cardiology for measuring aortic and pulmonary valve area and motion in addition to the diagnosis of a congenital and acquired heart disease. Ultrasound has replaced all of the modalities for diagnosing pericardial effusions. Aneurysms of the aorta can be measured accurately and followed at intervals to determine whether or not they are increasing in size.

During the year we hope to add neuroradiology and computerized axial tomography suites. The department will then offer a full range of subspecialty services. The Deaconess Radiologists are chosen because of proficiency in one subspecialty area with an interest in another subspecialty area. This allows the department to continually function with full range of subspecialty service when members are away at meetings or on vacation.

In addition to the overall increase in routine workload the procedures performed by the Radiologists have become more complicated and time-consuming, and therefore more costly to the hospital and patients in terms of equipment, manpower, and time. The concept of measuring departmental workload in number of examinations per year has become outmoded. As an example, a general radiologist may interpret 20 to 30 routine examinations per day, however, a vascular radiologist can only perform and interpret four angiographic studies per day. Similarly, the Ultrasound radiologist can only supervise and interpret 8 to 10 examinations per day, and the Nuclear Medicine radiologist 15 examinations per day.

The department will continue to maintain a high quality of service and care of our patients. It is for this reason that we have begun daily radiology conferences with the resident and intern staff to review and discuss the films of patients with current clinical problems.

As we review 1975, we are grateful to Dr. Mirle Kellett, who retired this year as chairman of the department, for his devotion and many years of service to the department and the hospital. It was during his chairmanship that many of these programs were initiated

Report of the Joint Center for Radiation Therapy

Samuel Hellman, M.D., Chairman

This has been the seventh year of existence of the Joint Center for Radiation Therapy. During this last year, 1908 new patients were seen. This represents a 1.3% increase in new patients. The origin of these patients is as follows.

New England Deaconess Hospital	587
Peter Bent Brigham Hospital	521
Beth Israel Hospital	394
Children's Hospital Medical Center	204
Boston Hospital for Women	142
Faulkner Hospital	60

The facilities for treatment of these patients have been essentially unchanged from last year. We are still operating at or beyond capacity and are eagerly awaiting the installation and completion of the new facility at the New England Deaconess Hospital which will greatly improve the available treatment capacities of the Joint Center for Radiation Therapy. Currently patients are treated on the 12 MeV linear accelerator at the Peter Bent Brigham Hospital or one of the three 4 MeV linear accelerators located at the Beth Israel Hospital, the New England Deaconess Hospital, and the Peter Bent Brigham Hospital. The new facility at the New England Deaconess Hospital will have an additional 12 MeV linear accelerator, as well as a new orthovoltage unit and new facilities for the treatment of skin tumors. The new linear accelerator will be interfaced with a computer to allow the development of new radiation therapy techniques allowing maximum radiation dose to be deposited in the tumors, while sparing the normal tissues.

The professional staff of the Joint Center for Radiation Therapy has changed somewhat. Dr. Stanley E. Order has left to become the Director of Radiation Oncology and Professor of Oncology and Radiological Sciences at the Johns Hopkins Medical Institutions. We are all pleased for Dr. Order, but disappointed at his leaving. Dr. Anthony J. Piro has replaced Dr. Order as the Director of the Joint Center's activities at the New England Deaconess Hospital, and Dr. Ralph R. Weichselbaum has joined our staff, with the primary clinical responsibility at the New England Deaconess Hospital. The physics group has been expanded with the addition to the staff of Drs. Kenneth Kase and Petin Kijewski. Dr. Kase has been charged with running the dosimetry laboratory of the Center, to be concerned with the accuracy and reproducibility of the

treatments given. Dr. Kijewski will be involved with the development of a computerized treatment to be available on the new New England Deaconess Hospital machine. Dr. J. Robert Cassady and Dr. Anthony J. Piro have been promoted to Associate Professors at the Harvard Medical School, and Dr. Robert Goodman to Assistant Professor.

The teaching activities of the Joint Center continue to emphasize residency training for physicians, pre and postdoctoral training for physicists, and the training of therapeutic radiological technologists. Currently there are 11 residents in the program. Dr. Weichselbaum completed the program and has joined the staff of the Joint Center for Radiation Therapy. Dr. Melvyn Richter has completed the program and has joined the faculty of the Thomas Jefferson Medical School, and Dr. Diana Nelson, who finished the program in 1974, has left the Harvard School of Public Health to join the faculty at the University of Rochester School of Medicine.

The need for radiation physicists is a continuing problem in this country. Our program has been concerned with training radiological physicists for both the master's and Ph.D. degrees. There are currently 10 students in this program. We have also been interested in a postdoctoral program for training of physicists in radiologic physics who have already been educated in other areas of physics. This program has been quite a success. There are currently two such postdoctoral trainees. In addition, Drs. Larsen and Kijewski, who are on the staff, were both trainees in this program. The radiologic technology program is quite active, and there are currently 11 in training.

Research activities in the department include clinical studies, physics investigations, and biological laboratory investigations. The clinical studies most active this year concern review and understanding the place of radiation therapy in the primary management of breast cancer. We have been impressed that we have had excellent local control of breast tumors with radiation therapy following biopsy. These results are early and will be followed carefully. The studies of Hodgkin's Disease and the other Lymphomas continue to occupy a major effort of the department. A series

of projects is being pursued concerned with the place of radiation and chemotherapy both alone and in concert in the management of these diseases. The multi-modality studies require the active collaboration of our colleagues in other disciplines. A special interest of the department is the study of whole body radiation in the treatment of the non Hodgkin's Lymphomas.

Major activities both in the clinic as well as in the biology laboratory are directed toward the understanding of the actions of drugs used in combination with x-ray. It is our belief that the judicious use of drugs and x-ray together will improve the curability of a number of malignant diseases. In order to best use these potent combinations, they must be studied carefully in order to optimally take advantage of their activity against tumors without excessively damaging normal tissues. These studies are being actively performed in both children and in adults collaboratively with our colleagues in medical oncology.

The research projects in the biologic laboratories are concerned with drug x-ray interactions in both cells in culture (the work of Drs. Belli and Piro) and in hematopoietic cells in vivo (the work of Drs. Botnick, Goodman and Hellman). Drugs are studied both alone and in combination with x-ray so as to better understand their mechanisms. Careful studies of the mechanisms of drug and x-ray damage and its repair are being pursued in the laboratories of Dr. Belli and Dr. Weichselbaum. Dr. Bloomer continues to study the potential usefulness of heavily labeled radioactive compounds able to be incorporated directly into tumor cells and thus destroying them. Dr. Knapp continues to study a murine ovarian tumor to which can be made antisera. These antisera can be used to treat the tumor under certain circumstances.

Physics research activities are concerned with the development of techniques which can maximize the dose of radiation delivered to the tumors and allow maximum sparing of normal tissues. These studies are a collaborative venture of Dr. Bjarngard and his colleagues in physics, Dr. Levene and his colleagues within the clinical section, and representatives of the Massachusetts Institute of Technology. It is expected that some of the techniques derived from this program will be directly applicable to the facility being developed at the New England Deaconess Hospital.

In summary, patient care, education, and research continue to be the major activities of the Joint Center for Radiation Therapy. A major theme continues to be the development and application of techniques which will maximize the damage to tumors without excessively damaging normal tissues. This requires research and development in physical methods, in biologic understanding, and in the judicious use of combinations of radiation and chemicals. These activities must be studied in the laboratory, but successful techniques only reach full realization when they can be applied to our patients.

Report of the Shields Warren Radiation Laboratory

Henry I. Kohn, M.D., Director

The Shields Warren Radiation Laboratory is devoted to radiological research, including the use of x-rays, gamma rays and radioactive isotopes, with special emphasis on problems associated with cancer. Its building, designed specifically for its research mission, was financed by gifts from a number of foundations, private donors, and a matching grant from the National Institutes of Health. Dr. Henry I. Kohn has been the Laboratory's Director since it was opened, few years ago.

The Laboratory's organization is unique in that, although owned and operated by the Deaconess Hospital, it has drawn its senior scientific staff from the ranks of the Harvard Medical School faculty, regardless of hospital affiliation. This policy was adopted to insure optimum staffing in a variety of specialized fields and carries with it a broad base of support.

Consistent with this general policy, the Laboratory promoted the establishment of and has provided the academic quarters (research and teaching) for the Joint Center for Radiation Therapy, itself a unique organization considered a model of interhospital cooperation.

The Deaconess Hospital, through the Laboratory, contributes to radiological research and to the practice of therapeutic and diagnostic radiology throughout the entire Longwood Avenue hospital complex as well as within its own organization.

Research in the Laboratory is supported largely from the National Institutes of Health. Mr. Robert D. Pence, Assistant Director of the Hospital and Laboratory Administrator, has reported the current level of support to be more than $1.5 million *per annum*. In addition, various members of the staff receive support from the Medical School or other institutions. The total number of full and part-time staff is about 100, and they are associated with five research groups.

Diagnostic Radiology

Under the leadership of Dr. Herbert L. Abrams and Dr. Norman K. Hollenberg this division is engaged in a wide variety of studies, but the major focus involves the assessment of the vascular system. Current studies include examination of the recruitment of blood supply by tumors; humoral factors in the genesis of a collateral arterial blood supply; the characteristics of the coronary, renal and gastrointestinal blood supply in a number of disease states; the characteristics of lymph nodes in response to immune mechanisms, tumor metastasis and xanthomatous processes; and functional characteristics of major arteries involved with atherosclerosis. In addition, active research into improvements at the technical level in diagnostic angiography is being performed. These have as their special focus the assessment of the blood supply of animal tumors.

Experimental Nuclear Medicine

Under the leadership of Dr. S. J. Adelstein, work is currently proceeding to characterize the nature of radiation-induced damage to mammalian chromatin, to clarify the basis of the anti-neoplastic effect of IdUdR, and to delineate the mechanisms of ^{60}Cobalt-induced destruction of peptides and amino acids. Radiochemical assays for measurement of a variety of hormonal and pharmacological molecules are routinely conducted, and several human liver enzymes are being characterized. Yet another area of effort is directed toward development, characterization and testing of new radiopharmaceutical agents. Supporting these investigations are a number of modern measurement instruments and a staff of highly trained scientific personnel.

Experimental Pathology

This division is common to the Shields Warren Radiation Laboratory and the Cancer Research Institute. Dr. Warren's offices and that of Dr. Olive Gates are located in the Shields Warren Radiation Laboratory. The research is performed in CRI and described under "The Report of the Cancer Research Institute." (see page 20)

Experimental Radiation Therapy

The research of this division, under the direction of Dr. Samuel Hellman, is described under "The Report of the Joint Center for Radiation Therapy." (see page 14)

Radiation Biology

This division under Dr. Henry S. Kaplan is concerned with the mutagenic effects of radiation and chemical exposure, and it uses the mouse as a model for man. Experiments have concentrated on a large group of histocompatibility genes (tissues transplantation genes), chosen because the processes they control are quite different from those associated with previous test systems. It has been found that the histocompatibility genes are much more resistant to x-rays than predicted by previous results. On the other hand, in spite of such resistance, some of them mutate spontaneously at a relatively high rate. Mice that carry such mutated genes can be particularly useful in the study of processes that underlie graft and organ transplantation. In collaboration with investigators at the Tufts and Melbourne Medical Schools and at the Netherlands Red Cross Laboratory in Amsterdam, it has been shown how a single gene mutation can effect and thereby help to define particular steps, but not others, in the processes of graft acceptance and rejection.

Report of the Cancer Research Institute

William V. McDermott, M.D.
Scientific Director

During the year, knowledge gained from the basic research which has been carried on in the Cancer Research Institute since it was founded 24 years ago has been directed more and more toward cancer in the human patient. Under the leadership of Dr. William V. McDermott, Scientific Director of the Institute and Director of the Deaconess-Harvard Surgical Service, work has continued on two comprehensive cancer programs, one in the area of cancer of the liver and the other in diagnosis of cancer of the pancreas which will combine the research of the Institute with that of several clinical departments, including the Departments of Medicine, Surgery, and Diagnostic Radiology. If pending government funds are awarded, these programs will be greatly expanded. Relating to these programs, Dr. Norman Zamcheck of the Mallory Laboratory at Boston City Hospital was appointed an Associate Member of the Institute.

The following research has been carried on in the numerous divisions of the Institute.

Biochemistry

The various studies in this Division are being carried out by units under the direction of Dr. W. Eugene Knox. A principle about neoplasms is being tested in human material that was earlier learned from animal studies. The chemical compostions of different kinds of tumors resemble one another, and more so with increasing undifferentiation. This prototypic composition of tumors is similar to that of normal embryonic tissues. In collaboration with the Growth Laboratory, systematic studies of normal, embryonic, and neoplastic human tissues are underway, as are preliminary tests of the possibilities of recognizing tumors in patients by the special pattern of enzymes that leak from them into serum.

One new area of investigation is the development and use of a chemical measure of cyclophosphamide's activity in the body in order to improve the utility of this effective anti-tumor agent. In another area, an abnormality in the skin of certain rats was identified as the new genetic entity, infantile icthyosis. Skin so affected shares some characteristics with pre-neoplastic skin, and the effect of carcinogenesis in this strain is of great interest.

Electron Microscopy

Dr. Micheline Federman and her staff continued to study osteogenesis at the light and electron microscopic levels and to prepare undecalcified bone sections from human bone biopsies for colleagues both within the Hospital and from other institutions.

In February of 1975, Electron Microscopy was transferred to Anatomic Pathology, which will be responsible for the electron microscopic work of both that department and the Institute.

Experimental Pathology

Under the leadership of Dr. Shields Warren, this division has been primarily concerned with radiation carcinogenesis, particularly with the production of leukemia in rats and mice by low-level radiation. This work has been supported by the United States Research and Development Administration and by the National Cancer Institute. As a result of the cessation of the cancer research training program of the N.C.I., the division's cooperative training program with Boston University for the preparation of radiobiologists was discontinued. This program had been highly successful, providing over 30 research workers in radiobiology during the 13 years of its existence.

As the carcinogenic effect of asbestos has been increasingly realized in recent years it has seemed valuable to test further the efficacy of asbestos fibers of both Canadian and Rhodesian origins as a carcinogen for the lung. It is also hoped that it may be determined whether radiation, also a carcinogen for the lung,

will serve to neutralize or reinforce the carcinogenic effects of asbestos. Long-range experiments on rats have been begun to study this point. The experiments are expected to run for two or three years.

Dr. Olive Gates contributed her services as a volunteer. Dr. Warren serves as Chairman of the United States Delegation, establishing new orientation of the studies for the Hiroshima/Nagasaki survivors.

Thirteen scientific articles were published.

Growth Laboratory

While continuing basic studies on the enzymology of an ever-extending spectrum of rat neoplasms, under the leadership of Dr. Olga Greengard, the division began to test the applicability of some of its conclusions to human tumors. The initial result on enzyme measurements which can discriminate between lung carcinoma and non-neoplastic lung are promising enough to warrant extension of the project.

This year's studies on normal human fetal liver delineated the extent to which our detailed knowledge on the pattern of hepatic biochemical differentiation in experimental animals is applicable to man. Enzyme systems which develop at late stages of gestation and may account for some metabolic problems in premature infants have been identified.

Nutrition

Recognition of the importance of diet and nutrition in any comprehensive cancer program has led to the development of a new nutrition/metabolism unit, under the direction of Dr. George Blackburn. Reasons for weight loss, resultant protein calorie malnutrition and impaired cell-mediated immunity observed in many cancer patients have been the primary effort of this research, directed toward affecting by nutritional means intermediary metabolism to improve body protein synthesis, muscle strength, and sense of well-being. Studies of metabolic response to injury and its alteration by intravenous feedings have resulted in major conceptual and practical changes in the nutritional support of hospitalized patients and the interpretation of the response to injury. Because these aims have direct clinical application, patient care and research goals are being provided through the Hospital's Hyperalimentation Service which consists of representatives from the Department of Medicine, Surgery, Dietary, Nursing, and Pharmacy in a direct patient support team whose goal is to optimize the fluid, electrolyte, and nutritional care of the seriously ill patient. Such a sophisticated approach is required at a specialty referral hospital with the obligations of a major teaching center. The principal investigators of this division also serve as consultants for the National Research Council's Committee on Nutrition and Infection and the newly established Diet, Nutrition and Cancer Program of the National Cancer Institute.

Rehabilitation

This was the first year that the Ambulatory Rehabilitation Center, under the Direction of Dr. John Rowbotham and coordinated by Mrs. Edith Lenneberg, provided services to cancer patients other than those suffering from diseases of the bladder and intestines. Emphasis in the program is on reduction of constraints on function imposed by malignant diseases and their treatments. An evaluation method has been developed which permits systematic identification of rehabilitation needs. As data are collected, it will be possible to document rehabilitation needs statistically, quantitatively, and longitudinally, by disease, by treatment, modality, or for the population as a whole.

Tumor Registry
The Tumor Registry, part of Medical Records, completed its first full year of operation in its new quarters in the Cancer Research Institute, under the direction of Dr. W. Eugene Knox. The experiences gained in diagnosing, treating and following each New England Deaconess Hospital patient with neoplastic disease has been registered in coded form in the Harvard-M.I.T. computer. Special programs make it instantly available for study. The number and stage of the cases of breast cancer in women that were seen here during earlier control periods, immediately after there was national publicity about this disease in two prominent women, provided an example of use of this information which will affect public policy about this disease in the future.

Office of Grants and Contracts
The Office of Grants and Contracts managed by Miss Constance A. Langone during the year prepared for various departments of the Hospital as well as CRI applications and budgets for 31 grants and contracts and managed those awarded from thirteen federal and private agencies and institutions in the amount of $850,000. In addition, the Office participated in three national and international studies of various cancer centers which have proved valuable in identifying and quantifying all cancer research, care, and control activities of the entire hospital. Information furnished as a result of these studies and surveys will be compiled in national and international publications describing the scope and importance of cancer in the various participating institutions, and will be made available to them, to the federal government, and to organizations concerned with cancer research and care, as well as patient referral.

Transplantation and Immunology
Dr. Anthony Monaco and his group have studied the prolonged allograft survival in animals produced by antilymphocyte serum (ALS) and donor bone marrow infusion. Mary Wood, Research Associate in Surgery, has shown that unresponsiveness is due to immunological enhancement. The enhancing factors produced by ALS and marrow may be antibodies to receptor sites on the recipient's lymphocytes. Production of anti-receptor antibody in a heterologous species may be possible for use as a biological immunosuppressive agent. Dr. James Gozzo and associates have studied bladder cancer associated antigens in urine of bladder tumor patients. Using immunological techniques, bladder tumor associated antigen(s) has been demonstrated in 60 to 90% of urines studied. This antigen, a globulin, is absent in normal urines but is frequently detected in infected urines. Antigen isolation and purification will permit production of specific anti-sera which can be used in refined immunological screening assays for early detection of bladder cancer. It is hoped that within two years a satisfactory screening assay for detection of early stage bladder carcinoma will be achieved.

Report of the Friends of the Deaconess

Mrs. Launiston Ward, Jr
President

The term "change" has been the word heard at various hospital meetings whether at Deaconess or at outside hospital gatherings which I have attended. But regardless of the change we experience, the Friends do have projects that persist, producing warm relationships plus revenues for the hospital.

The Thrift Shop, even with its sign down much of the time, due to the constant construction work in the area, managed to make as their '74 - '75 gift, the sum of $16,828.96. This took greater effort by the entire committee this season due to this building chaos. We certainly thank this hard working group who sort, clean and mark. We also thank those who donate. Please keep up the donations. Do not forget us so that our total may be even greater in the future. Good merchandise is much sought after in this inflation era.

The Nursing Scholarship program was benefited by three projects: one hundred and thirty-six Methodist women's societies contributed $2,179.93, an increase over the previous year; the Christmas Bazaar netted $2,874.89 with its array of decorations, household and children's items, the popular food and candy selections plus the surprising white elephant table; while the best spring "Pops" ever, starring Roberta Peters and Robert Merrill, added $1,485.50 to our total of $6,540.32.

The Diversional Therapy staff worked with approximately 500 patients, on an average of three days a week. We thank patients for their volunteer contributions to cover the costs of the varied, well-stocked supplies. This segment of caring about the patient who is away from home and family is most vital.

Hospitality we don't want to change but to continue. We try to have "The Friends" spirit felt at its annual fall tea, at the warm and gay Christmas Open House and at the informative spring luncheon as well as throughout the year.

The performance of the Gift Shop showed a great change that was reflected in a remarkable jump in gross sales over this fiscal season to $81,123.75. This was

$15,839.88 over last year. However, with the hospital's continuing generous reimbursement policy for salaries, this year $8,960, the total gross was $90,083.75. The expenses for the year were a total of $67,514.47. The breakdown is as follows: $52,911.87 for merchandise; $10,437.90 for salaries; $1,597.10 for state sales tax; $2,152.90 to the I.R.S. and $414.70 for miscellaneous items.

When the September inventory was taken, merchandise at the close of the fiscal year was valued at $39,885.31.

The amount donated to the hospital from the Gift Shop was $26,000. $22,569.28 is the amount made in the Gift Shop, revenues less expenses. While the remainder, making up the difference, was what the Gift Shop had in reserve at the start of the fiscal year.

With this amount of money being generated by sales, we feel that it is time not to accept further monies from the hospital. The hospital has been extremely gracious in its help to establish a good working basis for a successful shop. Now the Friends must do it alone. The Gift Shop committee and the Board of the Friends are most grateful for the hospital's deep interest.

Within the realm of individuals, we find changes. We sadly report that the position of Director of Volunteer Services has been phased out for the time being. We thank Mrs. Irma Kellner for her eleven plus years of help to all of us in each segment of volunteerism. When the position is re-thought, we will report our decision. Until that time, Marjorie LeBeau is graciously filling the gap.

The position of Treasurer has changed Mrs. Shields Warren stepped down after 37 years of constantly caring for finances. An original founder of the Friends, she felt that it was time to care for other responsibilities, but would still be involved with the Friends in other ways. One cannot stop caring and doing after such effectiveness. We thank her sincerely and wish her interest in all her projects.

With the retirement of Mr. Lowry, we thank our ally and help for his continuing advice to us collectively and individually. There were "sticky" times when his word and presence smoothed the way. May his coming days allow him to enjoy his many hobbies and his family. The Friends welcome Mr. Laurens MacLure

Perhaps the various inconveniences created by building, parking, etc. caused changes in the pattern of volunteering at Deaconess this year. It is not easy with the various demands which beset the volunteer. I am grateful to our hardcore group and to those who also gave small portions of time. Let us continue work but with growth. We will then continue to support our goals and projects. Our first $50,000 installment pledge to the Nursing School was paid in December. The next of the same amount will be paid in December of 1975. With this project and with the many new planned projects within various segments of Deaconess life, "challenge" ought to be the key word for the Friends not "change."

Balance Sheet
September 28, 1975 and September 29, 1974

Assets

		1975	1974
Unrestricted Funds			
Current Assets:	Cash, certificates of deposit, etc.	$3,593,532	$2,412,813
	Investments (market value, $813,045) (Note 1)	808,106	
	Funds held in trust - cash and U.S. Treasury Bills (Notes 2 and 3):		
	Construction funds	524,898	250,930
	Mortgage payment fund	477,309	199,016
	Accounts receivable - less allowance of $992,167 in 1975 and $1,289,800 in 1974 for uncollectible accounts	6,266,564	5,713,473
	Inventories of supplies - at cost	355,927	317,984
	Prepaid expenses, etc.	290,897	171,452
	Total current assets	12,317,233	9,065,668
Trustee Designated Funds:	Cash, certificates of deposit, etc.		1,239,955
	Investments (market value: 1975, $336,529; 1974, $205,275) (Note 1)	357,812	261,504
	Total trustee designated funds	357,812	1,501,459
Funds Held in Trust -	Cash and U.S. Treasury Bills (Note 2 and 3):		
	Construction funds	1,622,454	5,583,949
	Debt service reserve fund, etc	1,445,951	1,596,660
	Total funds held in trust	3,068,405	7,180,609
Property, Plant, and Equipment -	Net (Notes 2 and 3)	28,996,375	22,242,129
	Total	$44,739,825	$39,989,865
Restricted Funds			
Special Purpose Funds:	Cash, certificates of deposit, etc.	$219,518	$138,685
	Investments (market value: 1975, $572,355; 1974, $433,937) (Note 1)	593,048	546,953
	Grants receivable	294,733	268,470
	Total Special Purpose Funds	$1,107,299	$954,108
Endowment Funds:	Cash, certificates of deposit, etc.	$65,934	
	Investments (market value: 1975, $2,212,429; 1974, $1,979,212) (Note 1)	2,285,088	$2,494,327
	Real estate, equipment, and furnishings - at cost, less accumulated depreciation: 1975, $1,206,813; 1974, $1,099,192 (Notes 2 and 4)	4,059,537	4,057,412
	Total Endowment Funds	$6,410,559	$6,551,739
Plant Replacement and Expansion Funds:	Cash, certificates of deposit, etc.	$386,351	$77,829
	Building fund receivables:		
	Grant	1,425,000	
	Pledges	263,278	
	Total Plant Replacement and Expansion Funds	$2,074,629	$77,829

See notes to financial statements.

Liabilities and Fund Balances

		1975	1974
Unrestricted Funds			
Current Liabilities:	Accounts payable and accrued liabilities	$3,332,890	$2,606,934
	Accrual for settlements with third-party payors (Note 1)	2,555,477	756,427
	Deferred nursing school tuition	364,438	354,482
	Advances from third-party payors	329,200	265,000
	Current portion of long-term debt (Note 3)	450,000	
	Total current liabilities	7,032,005	3,982,843
Deferred Revenue -	Third-party reimbursement (Note 2)	713,400	643,400
Long-Term Portion of Mortgage Debt -	Massachusetts Health and Educational Facilities Authority - less unamortized discount of $238,088 in 1975 and $251,088 in 1974 (Note 3)	14,211,912	14,648,912
Fund Balances		22,782,508	20,714,710
	Total	$44,739,825	$39,989,865
Restricted Funds			
Special Purpose Funds:	Accumulated unexpended gifts and bequests, etc.	$ 688,821	$ 564,942
	Unexpended research grants	418,478	389,166
	Total Special Purpose Funds	$ 1,107,299	$ 954,108
Endowment Funds:	Mortgage note payable (Note 4)	$ 2,257,268	$ 2,352,044
	Fund balances	4,153,291	4,199,695
	Total Endowment Funds	$ 6,410,559	$ 6,551,739
Plant Replacement and Expansion Funds:	Accounts payable	$ 545,800	
	Fund balances	1,528,829	$ 77,829
	Total Plant Replacement and Expansion Funds	$ 2,074,629	$ 77,829

See notes to financial statements.

Statement of Revenues and Expenses for the Fiscal Years (52 Weeks) Ended September 28, 1975 and September 29, 1974

		1975	1974
Patient Service Revenue		$40,069,097	$31,639,496
Less -	Free care, provision for uncollectible accounts, contractual adjustments, etc	4,142,280	1,890,585
Net Patient Service Revenue		35,926,817	29,748,911
Other Operating Revenue	(Including $763,850 in 1975 and $867,796 in 1974 transferred from special purpose funds) (Note 1)	1,433,310	1,426,714
	Total operating revenue	37,360,127	31,175,625
Operating Expenses:	Professional care of patients:		
	General	8,273,407	7,357,302
	Special	13,810,207	11,226,915
	Household and property	3,554,082	2,497,574
	Dietary	2,506,767	2,098,295
	General services and administration	4,280,375	3,514,208
	Employee benefits	3,114,845	2,414,124
	Depreciation (Note 2)	1,057,249	1,063,969
	Research, etc.	763,850	867,796
	Interest	297,341	370,847
	Total operating expenses	37,658,123	31,411,030
Loss from Operations		297,996	235,405
Nonoperating Revenue:	Net income from endowment funds	158,911	143,206
	Donations and other distributions - net	65,758	104,432
	Interest, etc.	190,948	228,462
	Total nonoperating revenue	415,617	476,100
Excess of Revenues Over Expenses		$ 117,621	$ 240,695

See notes to financial statements.

Statement of Changes in Fund Balances for the Fiscal Years (52 Weeks) Ended September 28, 1975 and September 29, 1974

		Unrestricted Funds	Restricted Funds		
			Special Purpose Funds	Endowment Funds	Plant Replacement and Expansion Funds
Balance, September 30, 1973		$19,949,530	$ 976,901	$4,247,345	$ 77,069
Increases (Decreases):	Legacies, gifts, etc.	349,232	72,601	28	30,978
	Building fund receipts				92,312
	Grants for specified purposes		762,403		
	Investment income		66,018		760
	Net loss on sales of investment securities		(4,056)	(36,643)	
	Excess of revenues over expenses for the year	240,695			
	Transfer to other operating revenue		(867,796)	(11,035)	
	Total	20,539,457	1,006,071	4,199,695	201,119
Interfund Transfers -	Investment in buildings and equipment	175,253	(51,963)		(123,290)
Balance, September 29, 1974		20,714,710	954,108	4,199,695	77,829
Increases (Decreases):	Legacies, gifts, etc.	243,799	208,102	36,608	59,231
	Building fund receipts				3,057,992
	Grants for specified purposes		671,049		
	Investment income		64,747		22,892
	Net loss on sales of investment securities		(9,594)	(83,012)	
	Excess of revenues over expenses for the year	117,621			
	Transfer to other operating revenue		(763,850)		
	Total	21,076,130	1,124,562	4,153,291	3,217,944
Interfund Transfers	Investment in buildings and equipment	1,706,378	(17,263)		(1,689,115)
Balance, September 28, 1975		$22,782,508	$1,107,299	$4,153,291	$1,528,829

See notes to financial statements.

Statement of Changes in Financial Position of Unrestricted Funds for the Fiscal Years (52 weeks) Ended September 28, 1975 and September 29, 1974

Funds Provided:		
Operations:		
Loss from operations	$ (297,996)	$ (235,405)
Add operating expenses not requiring current use of funds:		
Depreciation (includes $79,297 in 1975, and $79,012 in 1974 charged directly to other operating revenue)	1,136,546	1,142,981
Increase in deferred third-party reimbursement (Note 2)	70,000	60,000
Amortization of bond discount	13,000	17,112
Funds provided from operations	921,550	984,688
Nonoperating revenue - net	415,617	476,100
Total funds provided from operations and nonoperating revenue	1,337,167	1,460,788
Proceeds of bond issue (Note 3)		14,631,800
Construction costs reimbursed from construction funds (Note 3)	4,513,868	2,048,100
Transfers from debt service reserve fund, etc. - net	349,726	
Unrestricted legacies	243,799	349,232
Transfers from Restricted Funds - net	1,706,378	175,253
Decrease in trustee designated funds	1,143,647	
Total funds provided	9,294,585	18,665,173
Funds Applied:		
Reduction of long-term mortgage debt	450,000	5,372,048
Payments to debt service reserve fund, etc. - net (Note 3)		1,596,660
Purchase of investments in construction funds	301,444	7,632,049
Additions to property, plant, and equipment	7,890,792	2,252,861
Increase in trustee designated funds		115,258
Total funds applied	8,642,236	16,968,876
Increase in Working Capital	$ 652,349	$ 1,696,297
Summary of Changes in the Components of Working Capital:		
Increase (decrease) in current assets:		
Cash, certificates of deposit, etc.	$1,180,719	$ 591,346
Investments	808,106	
Funds held in trust	1,002,207	449,946
Accounts receivable - net	553,091	1,105,098
Grant receivable		(400,000)
Inventories of supplies	37,943	41,470
Prepaid expenses, etc.	119,445	(22,418)
Total	3,701,511	1,765,442
Decrease (increase) in current liabilities:		
Accounts payable, etc.	(725,956)	(790,848)
Accrual for settlements with third-party payors	(1,799,050)	665,380
Deferred nursing school tuition	(9,956)	(79,650)
Advances from third-party payors	(64,200)	135,973
Current portion of long-term debt	(450,000)	
Total	(3,049,162)	(69,145)
Increase in Working Capital	$ 652,349	$1,696,297

See notes to financial statements.

Auditors' Opinion

New England Deaconess Hospital:

We have examined the balance sheet of New England Deaconess Hospital as of September 28, 1975 and September 29, 1974 and the related statements of revenues and expenses, changes in fund balances, and changes in financial position of unrestricted funds for the fiscal years (52 weeks) then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As more fully described in Note 1 to the financial statements, it is the consistent practice of the Hospital to record unrestricted legacies received as credits directly to unrestricted fund balances. In our opinion, generally accepted accounting principles require that such legacies be reported as nonoperating revenue.

In our opinion, the accompanying financial statements present fairly the financial position of the Hospital at September 28, 1975 and September 29, 1974 and , except for the effects of crediting unrestricted legacies received directly to unrestricted fund balances as described in the preceding paragraph, the results of its operations, changes in its fund balances, and changes in the financial position of its unrestricted funds for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Haskins & Sells
October 31, 1974

Notes to Financial Statements

1. Accounting Policies

General

The accompanying balance sheet of the Hospital is presented in two basic fund accountabilities of unrestricted and restricted funds. Fund balances restricted by outside sources are included in restricted funds and are distinguished from unrestricted fund balances allocated to specific purposes by action of the Board of Trustees (trustee designated funds).

Restricted gifts and grants and certain miscellaneous income from restricted resources are added to the appropriate restricted funds. Restricted special purpose funds, when expended for current operating purposes, are transferred to unrestricted funds and are reported as other operating revenue.

It is the consistent policy of the Hospital to consider unrestricted legacies received ($243,799) and $349,232 in 1975 and 1974, respectively) as capital resources and to credit such receipts directly to unrestricted fund balances. Generally accepted accounting principles for hospitals, as set forth in the Hospital Audit Guide issued by the Committee on Health Care Institutions of the American Institute of Certified Public Accountants, require the reporting of such amounts as nonoperating revenue. Had the aforementioned amounts been so reported, the Hospital would have reported an excess of revenues over expenses of $361,420 in 1975 and $589,927 in 1974.

Investments

Investments are stated at cost or, if received by gift or bequest, at fair market value when received. During 1974 the Hospital pooled substantially all of its investments. The investment pool is operated on the "market-value" method whereby each participating fund is assigned a number of units based on the market value of the assets of the pool at the time of entry of the fund into the pool. Income of pool operations is allocated to participating funds based on their respective shares of the pool.

Estimated Settlement with Third-Party Payors

Preliminary calculations of final cost reimbursement adjustments relative to third-party contracts with Blue Cross and Medicare are reported in the accompanying balance sheet as a current liability. Cost reports to be filed for the current year, as well as cost reports filed for 1974, are subject to final determination by the reimbursement agency under each program. Variances between preliminary calculations and final settlements are included in the statement of revenues and expenses in the year in which the settlements occur.

Other

Other significant accounting policies are set forth in the financial statements or in the notes which follow. The prior year's financial statements include certain reclassifications of amounts previously reported.

2. Property, Plant, and Equipment

Property, plant, and equipment of unrestricted funds are stated at cost less accumulated depreciation and are summarized as follows:

	1975	1974
Land	$ 468,946	$ 468,946
Buildings	13,937,119	13,741,077
Fixed equipment	12,600,068	12,236,273
Major movable equipment	5,676,292	4,727,642
Construction in progress	8,524,754	2,243,859
Total	41,207,179	33,417,797
Less accumulated depreciation	12,210,804	11,175,668
Property, plant, and equipment - net	$28,996,375	$22,242,129

Depreciation is computed using the straight-line method over the estimated useful lives of depreciable assets. As to certain depreciable assets acquired before 1971, the Hospital uses accelerated depreciation methods to determine reimbursable costs under a third-party reimbursement agreement. The revenue attributable to the excess of accelerated over straight-line depreciation is deferred and will be added to income when the depreciation timing differences reverse. Revenue thus deferred for 1975 and 1974 amounted to $70,000 and $60,000, respectively.

The Hospital has under construction a Clinical Laboratory and Radiation Therapy Facility with an estimated aggregate cost, including the purchase of specialized equipment, of approximately $6,340,000, of which $5,387,042 and $1,657,124 is included in construction in progress at September 28, 1975 and September 29, 1974, respectively. The Hospital also has under construction a new Nursing School facility with an estimated aggregate cost of $5,000,000, of which $2,837,795 and $244,480 is included in construction in progress at September 28, 1975 and September 29, 1974, respectively.

3. Long-Term Debt

On November 8, 1973, the Massachusetts Health and Educational Facilities Authority (the Authority) sold $14,900,000 principal amount of revenue bonds, designated New England Deaconess Hospital Issue, Series A, and loaned the proceeds therefrom to the Hospital for the purposes described below. With certain exceptions, principally the Medical Office Building, all of the Hospital's land and buildings (including contents), as well as all new facilities to be constructed from the proceeds of the financing, are pledged as collateral in connection with the mortgage conveyed by the Hospital to the Authority. The Hospital has also granted to the Authority a first lien on certain defined gross receipts (including related accounts receivable) as additional security for payment of the mortgage.

The mortgage proceeds were used first to pay all existing unrestricted fund long-term mortgage debt as of November 8, 1973. The remaining proceeds are being used principally for construction of a Clinical Laboratory and Radiation Therapy Facility and for the purchase of specialized equipment (Note 2). Unexpended proceeds are being held in trust for the Hospital by the Authority.

The mortgage agreement provides for payment to a debt service reserve fund of an initial deposit of principal and interest and subsequent monthly payments to a mortgage payment fund in amounts proportionate to the Authority's (a) annual principal payments on sinking fund instalments, ranging from $450,000 in 1976 to $525,000 in 2005, and (b) semiannual interest payments at rates varying from 4.6% to 5.7% over the lives of the bonds.

4. Mortgage Note Payable

The endowment funds mortgage note bears interest at 5¼% and is payable in monthly instalments through January 1991, including, at September 28, 1975, $99,404 due within one year. The Medical Office Building is assigned as collateral under the terms of this mortgage.

5. Employees' Retirement Plan

The Hospital has a noncontributory defined benefit retirement plan covering substantially all full-time employees not over age 55 at date of employment. Total pension expense aggregated $940,000 in 1975 and $755,000 in 1974 including, in both years, amortization over a forty-year period of the unfunded actuarially computed past service liability. Such unfunded liability approximated $4,500,000 as of the last plan valuation date (September 30, 1973). The actuarially computed value of vested benefits under the plan as of the last plan valuation date exceeded the total of the pension fund net assets and balance sheet accruals by approximately $3,200,000. Substantially all amounts provided have been paid to the trustee of the plan.

6. Funds Held in Trust by Others

The Hospital is a beneficiary of a non-discretionary trust held by others which is not reported on the accompanying balance sheet. The quoted market value of the Hospital's share of trust assets was $1,609,923 at September 28, 1975 and $1,346,078 at September 29, 1974. The Hospital received distributions of income from the trust of $90,762 in 1975 and $110,549 in 1974.

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Since the founding of the Deaconess in 1896, patients have been thought of as people first and as "cases" second. The hospital over these many years has had the reputation of offering the best in medical care. To maintain this reputation the hospital must have the funds to strengthen what is now the smallest endowment of any comparable hospital in the area.

Gifts to help us provide excellence in medical care may be given directly — in cash, securities, pledges, letters of intent, and bequests — or they may provide long-range support to the Deaconess while preserving their income for family or personal needs.

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